

ISAkov, L. G.

ISAKOV, L.

Reinforced concrete supports. Nauka i zhizn' 23 no.6:51 Je '56.
(MLRA 9:9)

(Coal mines and mining)

ACC NR: AT6027159

(N)

SOURCE CODE: UR/2752/66/000/071/0057/0059

AUTHOR: Isakov, L. I.

ORG: none

TITLE: Operation of gas turbine gear apparatus without revolution rate controller under heaving conditions

SOURCE: Leningrad. Tsentral'nyy nauchno-issledovatel'skiy institut morskogo flota. Trudy, no. 71, 1966. Tekhnicheskaya eksploatatsiya morskogo flota (Technical operation of the Merchant Marine), 57-59

TOPIC TAGS: gas turbine, rotation, torque, marine engine, digital computer

ABSTRACT: The author analyzes the combined operation of screw and gear apparatus under heaving conditions of a ship, including determination of the change in revolution rate of the shaft, the screw torque, and the torque and power developed by the turbine if the steam output valve remains fixed. The deviation in gear apparatus rotating speed with no revolution rate controller, even where the screw surfaced, remained within 4.15% of the mean revolution rate established during heaving. The work was conducted for "Sofiya" tankers with nominal power of 19,000 hp and turbine torque of 130,000 kg-m in quiet water. Digital computers were used in the work. Orig art. has: 9 formulas and 1 figure.

SUB CODE: 13,09/ SUBM DATE: none/ ORIG REF: 003

UDC: 621.125:629.12:532.59.075.001.5

Card 1/1

ISAKOV, L.I.

The ShPA-2 exploratory boring unit. Razved. i okh.nedr. 22 no.11:36-
40 N '56. (MLRA 10:1)

1. Ministerstvo geologii i okhrany nedr SSSR Glavuralsibgeologiya.
(Boring machinery)

VOLODCHENKO, K.G.; BONAS, O.V.; ISAKOV, L.I.; SMIRNOV, V.A.; KUNICHENKO, M.S.; LASHKOVA, Ye.A.; UVAROVA, N.A.; CHEVOTKINA, M.A.; NIKOLAYEV, P.S., glavnyy red.; SEREBRYAKOV, L.P., glavnyy red.; DERZHAVINA, M.G., red.; GUROVA, O.A., tekhn.red.; IVANOVA, A.G., tekhn.red.

[ENV unified production norms for operations in geological prospecting; mining operations] Edinye normy vyrabotki na geologorazvedochnye raboty (ENV); gornopromyshlennyye raboty. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po geol. i okhrane neдр, 1959. (MIRA 13:6)
123 p.

1. Russia (1923- U.S.S.R.) Ministerstvo geologii i okhrany neдр.
2. Otdel ekonomiki geologorazvedochnykh rabot Vsesoyuznogo nauchno-issledovatel'skogo instituta mineral'noye syr'ya (VIMS) (for Volodchenko, Bonas, Isakov, Smirnov, Kunichenko, Lashkova, Uvarova, Chevotkina).

(Mining engineering--Standards)

GORINOV, Aleksandr Vasil'yevich, prof. Prinimali uchastiye: TURBIN, I.V., dotsent, kand.tekhn.nauk; KANTOR, I.I., dotsent, kand.tekhn.nauk; KONDRATCHENKO, A.P., dotsent, kand.tekhn.nauk; YEVREYSKOV, V.Ye., prof., retsenzent; LEBEDEV, A.I., dotsent, retsenzent; VOZNESSENSKIY, G.D., dotsent, retsenzent; ISAKOV, L.M., dotsent, retsenzent; DZHIGAMADZE, O.V., dotsent, retsenzent; CHERNYSHEV, G.P., inzh., retsenzent; MYSHKIN, G.N., inzh., retsenzent; ZAYTSEV, I.M., inzh., retsenzent; OZERETSKOVSKIY, V.P., inzh., retsenzent; ZARETSKIY, A.O., inzh., retsenzent; BUGROV, B.A., inzh., retsenzent; KOSTIN, I.I., prof., red.; BOBROVA, Ye.N., tekhn.red.

[Railroad surveying and designing] Izyskanie i proektirovanie zheleznykh dorog. Moskva, Vses.izdatel'sko-poligr.ob"edinenie M-va putei soobshcheniia. Vol.1. Izd.4., perer. 1961. 336 p. (MIRA 14:4)

1. Chlen-korrespondent Akademii nauk SSSR (for Gorinov). 2. Kafedra "Proektirovaniye i postroyka zheleznykh dorog" Novosibirskogo instituta inzhenerov zheleznodorozhnogo transporta (for Yevreyskov, Lebedev, Voznesenskiy, Isakov, Dzhigamadze). 3. Gosudarstvennyy proyektno-izyskatel'skiy institut "Gipromtransstroy" (for Chernyshev, Myshkin, Zaytsev, Ozeretkovskiy, Zaretskiy, Bugrov).
(Railroad engineering)

VOZNESENSKIY, G.D., kand. tekhn. nauk, dotsent; ISAKOV, L.M., kand.
tekhn. nauk, dotsent

Efficiency of building temporary bypass routes in the
construction of railroads. Trudy NIIZHT 26:29-47 '62.
(MIRA 16:8)

(Railroad engineering)

AL'BREKHT, V.G., prof.; DUBITSKIY, M.N., ~~kand. tekhn. nauk~~; ISAKOV,
L.M., ~~kand. tekhn. nauk, dots.~~; KONDAKOV, N.P., ~~kand.~~
~~tekhn. nauk, dots.~~; Prinsipali uchastiye: SHUL'GA, V.Ya.,
kand. tekhn. nauk, dots.; ANGELEYKO, V.I., prof.; CHLENOV,
M.T., kand. tekhn. nauk, retsenzent; TIKHOMIROV, V.I., inzh.,
retsenzent; POTOTSKIY, G.I., inzh., red.; MEDVEDEVA, M.A.,
tekhn. red.

[Planning of the organization of track maintenance and repair
work] Proektirovanie organizatsii putevykh rabot. [By] V.G.
Al'brekht i dr. Moskva, Transsheldorisdat, 1963. 186 p.
(MIRA 16:9)

(Railroads--Track)

VORONIN, M.I., dotsent; GRYAZNOV, V.I., dotsent; KETLER, V.G., dotsent;
PRASOV, L.Z., dotsent; VOZNESENSKIY, G.D., dotsent, kand.tekhn.nauk;
ZHABOTINSKAYA, L.A., dotsent, kand.tekhn.nauk; ISAKOV, I.M., dotsent,
kand.tekhn.nauk; LAZEBNIKOV, Yu.S., dotsent, kand.tekhn.nauk;
PROTSENKO, A.I., assistant

Manual on the design of railroads. Transp. stroi. 14 no.6:57-59
Je '64.

Through the pages of foreign magazines. Ibid.:55-56

(MIRA 18:2)

1. Leningradskiy ordena Lenina institut inzhenerov zheleznodoro-
znohnogo transporta imeni akademika V.N.Obratsova (for Voronin,
Gryaznov, Ketler, Prasov). 2. Novosibirskiy institut inzhenerov
zheleznodorozhnogo transporta (for Voznesenskiy, Zhabotinskaya,
Isakov, Lazebnikov, Protsenko).

USSR/Zooparasitology - General Problems.

G.

Abs Jour : Ref Zhur - Biol., No 11, 1958, 48161

Author : Isakov, L.S., Shul'man, S.S.

Inst : Karelo-Finnish Branch, AS USSR.

Title : Concerning the Resistance of Some Ectoparasites in
Sticklebacks to the Changes of a Salt Regimen.

Orig Pub : Tr. Kar.-Fin. fil. AN SSSR, 1956, vyp. 4, 68-73.

Abstract : No abstract.

Card 1/1

- 4 -

1. ISAKOV, M.
2. USSR (600)
4. Architecture - Conservation and Restoration - Daghestan
7. More attention to the conservation of architectural monuments. Arkhit. SSSR No. 5, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April 1953. Unclassified.

ISAKOV, M.A.; KARTASHEV, S.P.

Manufacturing suiting fabrics from staple fibers. Tekst.prom.
19 no.8:10-14 Ag '59. (MIRA 13:1)

1. Direktor Yegor'yevskogo melanzhevogo kombinata (for Isakov).
2. Glavnyy inzhener Yegor'yevskogo melanzhevogo kombinata (for Kartashev).

(Textile fabrics)

ISAKOV, M. G.

USSR/ Cosmochemistry. Geochemistry. Hydrochemistry

D.

Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 11515

Author : Svyazhin N.V., Isakov M.G.

Inst : Sverdlovsk Mining Institute

Title : Biotite-Albite Nephelinolite -- A Variety of Miascite from
Vishnevogorodskiy Alkaline Massif

Orig Pub : Tr. Sverdl. gorn. in-ta, 1956, No 26, 119-122

Abstract : Petrographic description of a new variety of miascite comprising $\leq 80\%$
by volume of nepheline, 16% by volume feldspars and 3.8% by volume biotite
Chemical composition of two specimens (in %): SiO_2 48.32; 52.72; TiO_2 0.11;
0.30; Al_2O_3 30.32; 29.9; Fe_2O_3 0.64; 0.84; FeO 1.86; 0.85; MnO 0.05;
0.042; MgO 0.07; 0.43; CaO 0.38; 1.51; Na_2O 12.95; 9.02; K_2O 4.33; 3.44;
 H_2O -; 0.24; P_2O_5 0.1; -; sum 100.28; 99.25. The rock contains veins of
pure nepheline 0.6 m thick.

1/1

15-57-4-4463

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 4,
p 63 (USSR)

AUTHORS: Svyazhin, N. V., Isakov, M. G.

TITLE: Biotite-Albite Nephelinolite, a Variety of Miaskite
From the Vishnevogorskiy Alkalic Massiv (Mass) (Biotit-
al'bitovyy nefelinolit-raznovidnost' miaskitov iz
Vishnevogorskogo shchelochnogo massiva)

PERIODICAL: Tr. Sverd. gorn. in-ta, 1956, Nr 26, pp 119-122.

ABSTRACT: An exposure of biotite-albite nephelinolites is found on
the western slope of the Potaninoy Mountains three kilo-
meters north of the town of Potaninoy. The nepheline-
rich rocks form an isolated band up to 700 m in length
and 100 m to 150 m wide in miaskites. They grade into
the miaskites. The principal mineral of the rock is
nepheline (70 to 80 percent of the total). Cancrinite
and zeolite minerals are sometimes found in fractures
in these rocks. Feldspars form 16 percent of the rock

Card 1/2

15-57-3-2932

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 3,
pp 70-71 (USSR)

AUTHOR: Isakov, M.G.

TITLE: Metasomatic Alteration of Miaskites in the Vishnevyye Gory
(Mountains) (o metasomaticheskoy izmenenii miaskitov
Vishnevyykh gor)

PERIODICAL: Tr. Sverdlsk. gos. in-ta, 1956, Nr 26, pp 126-133

ABSTRACT: In recent years abundant sericitized miaskites have been discovered in the Vishnevyye gory (mountains) which are distinguished by the complete replacement of nepheline by sericite. The most extensive distribution of sericite-bearing miaskite occurs in the peripheral parts of the miaskitic masses, where it is principally restricted to tectonic crush zones. Schistose and biotite-rich melanocratic miaskites are the first to suffer sericitization. The primary, unaltered miaskites are composed of microcline perthite, nepheline, albite, and accessory minerals (ilmenite, magnetite, apatite, sphene, sulfides, etc.);

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15-57-3-2932

Metasomatic Alteration of Miaskites (Cont.)

aegerine-augite and hastingsite are occasionally present. In the sericitized miaskites, although the structural and textural features of the rock have been preserved, the mineral content has been somewhat altered. These rocks contain microcline perthite, sericite, albite, calcite, and small quantities of quartz. Rutile and hematite occur as accessories, having formed by the breakdown of ilmenite. Albitization of microcline is characteristic, being somewhat dependent on the degree of sericitization of nepheline; but complete albitization is not observed even in those cases where the nepheline has been entirely replaced by sericite. The metasomatic regeneration of miaskites, a process which leads to the formation of nepheline-free sericitic alkalic syenites, is associated with potash metasomatism, which is most intense in structurally weakened zones. Inasmuch as sericitization is accompanied by some accumulation of ore minerals, it may serve as an important guide in prospecting. The chemical composition of primary miaskite (1) and of sericitized miaskites (2, 3) are given in the table.

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15-57-3-2932

Metasomatic Alteration of Miaskites (Cont.)

Component	1	2	3
SiO ₂	57.16	59.16	58.72
TiO ₂	0.383	0.31	0.42
Al ₂ O ₃	24.2	24.69	24.85
Fe ₂ O ₃	1.22	1.52	1.87
FeO	1.80	1.80	0.80
MnO	0.13	0.11	0.04
CaO	1.05	0.16	0.33
MgO	0.17	0.26	0.42
Na ₂ O	6.33	4.65	4.83

Card 3/4

ISAKOV, M.G.

Certain characteristics of the composition of rutile-amphibolite
and rutile-eclogite Ural ores. Trudy Uralmekhanobra no.5:138-
150 '59. (MIRA 15:1)

(Ural Mountains—Rutile—Analysis)

ISAKOV, M.G.

Nepheline rocks of the Urals and prospects for their
industrial use. Trudy Uralmekhanobra no.5:151-163 1959.
(MIRA 15:1)
(Ural Mountains--Nephelite)

ISAKOV, M.G.

Mineralogical composition of titanium-bearing sandstones.

Titan i ego splavy no.5:3-12 '61.

(MIRA 15:2)

(Titanium ores--Analysis)

(Sandstone--Analysis)

ISAKOV, M.G.

Mineralogical compositions of rutile-bearing amphibolites and
eclogites. Titan i ego splavy no.9:16-23 '63. (MIRA 16:9)
(Amphibolite—Analysis)
(Eclogite—Analysis)

ISAKOV, N.

Osetrovo harbor; second stage of construction. Rech. transp.
21 no.1:18 Ja '62. (MIRA 16:8)

1. Direktor Leningradskogo filiala Gosudarstvennogo instituta
proyektirovaniya na rechnom transporte.
(Lena River--Harbors)
(Osetrovo--Building)

CHERNYAK, S., inzh.; ISAKOV, N., inzh.; GANGARDT, G., inzh.

Pressing problem; importance to the national economy in the
building of the Kizi-Tabo Canal. Rech. transp. 22 no.11:14-15
N '63. (MIRA 16:12)

TUMANOV, I.I.; ISAKOV, N.A.; KHVALIN, N.N.

Field installation for determining the frost resistance of plants.
Vest.AN SSSR 32 no.7:69-72 J1 '62. (MIRA 15:7)

1. Chlen-korrespondent Akademii nauk SSSR (for Tumanov).
(Plants—Frost resistance)

FRIDMAN, I.R.; ISAKOV, N.A.

Vegetation chamber with electric illumination and temperatures slightly above freezing point. Fiziol. rast. 11 no.5:927-929 S-O '64. (MIRA 17:10)

1. Institut fiziologii rasteniy imeni Timiryazeva AN SSSR, Moskva.

YEVGEN'YEV, G.; ISAKOV, N.M., redaktor; VOICHOK, K.M., tekhnicheskiy redaktor.

[For the great construction projects] Dlia velikikh stroek. Lenin-grad, Izd-vo Ministerstva rechnogo flota SSSR, 1952. 39 p. [Micro-film] (MLRA 7:10)

(Hydraulic engineering)

BAKALEYNIKOV, Aleksandr Mikhaylovich; ISAKOV, Nikolay Mikhaylovich;
NIKITIN, P.S., redaktor; VOLCHOK, K.M., tekhnicheskiy redaktor

[Inclined plane boat elevator] Poperechnye naklonnye sudopod'emniki. Leningrad, Izd-vo "Rechnoi transport," Leningradskoe otd-nie, 1955. 219 p. (MLRA 9:3)
(Elevators)

ISAKOV, N.M., inzhener.

Basic trends in the development of the inland water transportation
industry. Rech. transp. 15 no.10:17-19 O '56. (MLBA 10:2)

(Ships--Maintenance and repair)

ISAKOV, N.M.

3(4)

PHASE I BOOK EXPLOITATION

SOV/2879

Vendrov, Semen Leonidovich, Aleksandr Afanas'yevich Groshev, Nikolay Mikhaylovich Isakov, Leonid Aleksandrovich Sergeyev, Iosif Mikhaylovich Shepshelevich, and VIKTOR Aleksandrovich Velichko

Sovremennaya tekhnika gidrograficheskikh izyskaniy (Modern Techniques in Hydrographic Surveying) Leningrad, Izd-vo "Rechnoy transport," Leningr. otd-niye, 1957. 170 p. 1,500 copies printed.

Ed. (Title page): Ye. V. Bliznyak, Doctor of Technical Sciences, Professor;
Reviewer: A. I. Gruzinov; Ed. (Inside book): D. M. Kudritskiy; Tech. Ed.:
K.M. Volchok.

PURPOSE: This book is intended for engineering and technical personnel engaged in hydrographic survey work. It may also serve as a textbook for students of hydrographic surveying.

COVERAGE: This book covers the basic principles and techniques of surveying inland waterways. It describes the role played by ultrasonics, radio, lighting

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Modern Techniques in Hydrographic (Cont.)

SOV/2879

engineering, and aerial photography in hydrographic surveying. Various sounding devices and range finders are described. No personalities are mentioned. There are 13 Soviet references.

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Modern Techniques in Hydrographic (Cont.)

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Modern Techniques in Hydrographic (Cont.)

SCV/2879

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AVAILABLE: Library of Congress (VK591.B55)

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MM/fal
12-29-59

ISAKOV, N.

New trend in planning industrial plants. Rech. transp. 19
no. 6:31-32 Je '60. (MIRA 14:2)

1. Direktor Lengiprorchtransa.
(Factories—Design and construction)
(Ships—Maintenance and repair)

ISAKOV, N., inzh.; BAKALEYNIKOV, A., inzh.; OL'BEK, A., inzh.

Inclined ship lift without sluice chambers. Rech. transp. 19
no. 11:36-38 N '60. (MIRA 13:11)
(Locks (Hydraulic engineering))

ISAKOV, Nikolay Mikhaylovich; GUSEV, M.N., kand. tekhn. nauk,
retsensent; SEMIKOVSKIY, N.M., dots., retsensent;
NIKITIN, G.M., red.; KAN, P.M., red.

[Technology of shipbuilding and ship repairs] Tekhnologiya
sudostroeniia i sudoremonta. Moskva, Transport, 1964. 320 p.
(MIRA 17:10)

L 7967-66

ACC NR: AP5025765

SOURCE CODE: UR/0286/65/000/018/0151/0151

AUTHORS: Bakaleynikov, A. M.; Isakov, N. M.; Ol'bek, A. P.

ORG: none

TITLE: A ship transport hoist. / Class 65, No. 139944

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 18, 1965, 151

TOPIC TAGS: elevating gear, elevator effectiveness, transport process, water traffic

ABSTRACT: This Author Certificate presents a ship transport hoist for transferring ships over a dam crest from one level to another. The hoist is made of a single-stage carriage moved by means of a hoisting drive mechanism along inclined runways of the upper and lower levels. The carriage is turned around on a turning wheel mounted on the crest of the dam. To increase the reliability of the transfer, the upper part of the turning wheel platform supporting the rail tracks is inclined to the horizontal. This inclination angle is equal to the angle of inclination of the ship hoisting runways of the two levels. When the runways are matched, one forms an extension of the other.

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L 7967-66

ACC NR: AF5025765

SUB CODE: GO/ SUBM DATE: 07Jan61

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Card 2/2

ISAKOV, N. M.

"An Improved Type of Microburette," Zhur. Obshch. Khim., 16, No.12,
1946.

Lab. Microchemical Analysis, Leningrad State U.

CA 13400, 13-14.

7

Method of titration in analytical chemistry. N. M. Iskhov (A. A. Zhukov State Univ., Leningrad). *Zh. Anal. Khim.*, 6, 281-7 (1961).—The proposed method of analysis is based on reactions in the solid state taking place upon intimate mixing and titration of the reactants. To det., e.g., Fe, 0.0008 g. of $\text{Fe}(\text{SO}_4)_2 \cdot 9\text{H}_2\text{O}$ contg. 0.00004 g. of Fe was thoroughly mixed with 7 g. of quartz sand (–300 mesh). The sand was added in small fractions each time mixing intimately. Next, 0.06 g. of the mix was placed in a small cup, to it was added a few small crystals of NH_4CNS , and the whole was triturated. The characteristic color appeared. The intensity of the color indicated the need to increase or decrease the sample. The effect of interfering elements can be masked. Thus, in the detection of Co with KCN , an intense blue color is obtained. In the presence of Fe^{3+} the red-brown color suppresses the blue. Addition of a few crystals of NaOH reduced the Fe^{3+} restoring the blue. In some cases a lasting color is obtained in the dry state where in the presence of H_2O the color quickly vanishes or does not appear, e.g., titration of SbCl_3 with Sudan III produces a lasting blue color which in the presence of H_2O disappears quickly. M. Houch

GORDEYEV, Vasiliy Aleksandrovich; GOR'KOV, V.K., kand. tekhn. nauk, retsenzent; ISAKOV, N.P., kand. tekhn. nauk, retsenzent; SIDOROV, Yu.P., kand. tekhn. nauk, retsenzent; AGADZHANOVA, I.A., red.;

[Dynamics of the mechanisms for warp releasing and tensioning in looms] Dinamika mekhanizmov otpuska i natiazheniia osnovy tkatskikh stankov. Moskva, Legkaia industriia, 1965. 223 p. (MIRA 18:10)

ISAKOV, N. P.

Isakov, N. P. — "Tension of the Thread in the Presence of Axle Unwinding in Processes of Preparatory Operations for Weaving." Min Higher Education USSR, Moscow Textile Inst, Moscow, 1955 (Dissertation for Degree of Doctor of Technical Sciences).

SO: Knishnaya Letpis', No. 23, Moscow, June, 1955, pp. 87-104.

ISAKOV, N.P.

Causes of fluctuations in thread tension during axial winding.

Izv. vys. ucheb. zav.; tekhn. tekst. prom. no. 3:125-130 '58.

(MIRA 11:7)

1. Ivanovskiy tekstil'nyy institut.
(Spinning)

ISAKOV, N.P.

Theory of thread tension. *Izv.vys.ucheb.sov.; tekhn.tekst.prom.*
no.3:92-95 '60. (MIRA 13:7)

1. Ivanovskiy tekstil'nyy institut im. M.V. Frunze.
(Spinning machinery)

ISAKOV, N.P.

Thread tension in the balloon of the winder. Izv. vys. ucheb.
zav.; tekhn. teks. prom. no. 2:88-95 '61. (MIRA 14:5)

1. Ivanovskiy tekstil'nyy institut imeni M.V. Frunze.
(Spinning)

ISAKOV, N.P., kand. tekhn. nauk, dotsent

Tension of the thread in a contour motion. Izv. vys. ucheb. zav.;
tekhn. leg. prom. no.5:163-169 '63. (MIRA 16:12)

1. Ivanovskiy tekstil'nyy institut imeni M.V. Frunze.

ISAKOV, Eng. N. V.

Feed Water Purification

Thermal treatment of feed water in locomobile boilers. Rab.energ. 2, No. 6,
1952

9. Monthly List of Russian Accessions, Library of Congress, December ¹⁹⁵²~~1950~~. Unclassified.

LYSENKO, F.I., polkovnik; ADENIN, A.S., polkovnik; BONDARENKO, V.Ye., polkovnik; ROGACHEV, F.B., polkovnik; RYB'YAKOV, M.M., podpolkovnik; BELYAKOV, S.A., polkovnik; ISAKOV, P.F., polkovnik; BURLYAY, A.A., polkovnik; SAVCHENKO, A.M., polkovnik; IVANOV, M.I., polkovnik; AVDEYENKOV, I.P., polkovnik; ZUBAREV, Ya.G., polkovnik; DIBROVA, I.Z., kapitan 1 ranga; TSVETKOV, R.V., general-mayor, red.; BRITVIN, M.I., polkovnik, red.; SHARPILO, P.M., podpolkovnik, red.; MYASHNIKOVA, T.F., tekhn.red.

[Party political work in the Soviet Army and the Navy] Partino-politicheskaya rabota v Sovetskoi Armii i Voenno-Morskoi Flote. Moskva, Voenizd-vo M-va obor.SSSR, 1960. 284 p.

(MIRA 13:6)

1. Voenno-politicheskaya akademiya imeni V.I.Lenina (for all, except Tsvetkov, Britvin, Sharpilo, Myashnikova).

(Russia--Armed forces--Education, Non-military)

KHMEI', A., general-laytonant; ISAKOV, P., polkovnik, kand.istoricheskikh
nauk, dotsent

"History of the Great Patriotic War of the Soviet Union."
Vol.3. Reviewed by A. Khmel', P. Isakov. Komm.Vooruzh.
Sil 2 no.15:87-92 Ag '62. (MIRA 15:7)
(World War, 1939-1945)

ISAKOV, P. [Petr Kuz'mich], (Candidate of Biological Sciences, Stalin Prize Winner)

Author of article, "In the Cabin of a Jet Plane," answering a reader's query on the conditions under which a pilot must fly since the appearance of jet aircraft. The author [who won his Stalin Prize for "inventions in the Light and Food Industry"] wrote of the concern shown for the health and comfort of pilots by the installation of special equipment in aircraft. (Komsomol'skaya Pravda, Moscow, 18 Jun 54)

SO: SUM No. 224, 28 Sep 1954

ISAKOV, P. K. and MALKIN, V. B.

"Critical Remarks Regarding the Book 'Aviation Medicine'," *Voyenno-medits. zhurnal*, No.2, pp 92-95, 1955

Translation D 312229, 15 Aug 55

ISAKOV, P.K.

Cand. Biol. Sci.

"Problemy nevesomosti" (The problems of weightlessness),
Nauka i Zhizn', Vol. 22, No. 12, December, 1955, pp. 17-20.
For translation, see Appendix XX.

9006302-V

Rand RM-1706 trans., 21 Jun 56 - in Library #5

STASEVICH, Restislav Andreyevich, kandidat tekhnicheskikh nauk; ISAKOV, Petr
Kuz'mich, kandidat biologicheskikh nauk; SHIL'TSEV, A.N., redakter;
MYASHKOVA, T.F., tekhnicheskiiy redakter.

[Speed, acceleration, pull of gravity; some physical and physiological problems as applied to aviation] Skeresti, uskereniia, peregruzki; nekoterye voprosy fiziki i fiziologii primenitel'no k aviatsii. Moskva, Voen.izd-vo Ministerstva obr. SSSR, 1956, 84 p. (Aerodynamics) (Aviation mechanics (Persons)) (MIRA 9:6)

ISAKOV, P. Chairman of Committee for Cosmical Medicine, Astronautics Section of
Dosaef USSR, Stalin Prize Winner

"Problems of Living in Outer Space." Promysh. Ekonom. Gazeta, 7 Nov 1957.

ISAKOV, P. K.

"Zhizn' na Sputnike," Komsomolskaya Pravda, 5 November 1957

"Kak Budut Edety Astronavty," ibid, 21 March 1957

ISAKOV, P. K. and KUZNETSOV, A. G.

"The Congress of Aviation Surgeons in Warsaw," Voenno-medits. zhur.,
No. 4, pp. 56-59, 1957

Translation 1120033

27(2); 29(0)

PHASE I BOOK EXPLOITATION

SOV/2091

Isakov, Petr Kuz'mich, Candidate of Biological Sciences

Problemy poletov v kosmos (Problems in Cosmic Flight) Moscow, Izd-vo "Znaniye," 1958. 32 p. (Series: Bibliotekha sel'skogo lekatora)
60,000 copies printed.

Sponsoring Agency: Vsesoyuznoye obshchestvo po rasprostraneniyu politicheskikh i nauchnykh znaniy.

Scientific Ed.: B. V. Malkin; Ed. of Publishing House: L. A. Novochadova; Tech. Ed.: Ye. V. Savchenko.

PURPOSE: This booklet is the stenographic record of a public lecture given in the Main Auditorium of the All-Union Association for Dissemination of Political and Scientific Information in Moscow. It is intended for the general reader.

Card 1/3

Card 2/3

3

Problems in Cosmic Flight

SOV/2091

Problem of Maintaining Life in an Enclosed Space

6

Problem of Compensating for the Shielding Properties of the
Earth's Atmosphere

12

Problem of Rescuing the Crew of a Cosmic Rocket in an
Emergency

17

Problem of Injection Into Orbit and Flight in Orbit

20

AVAILABLE: Library of Congress (TL 790.18)

IS/dfh
7-16-59

Card 3/3

ISAKOV, P. K.

"O Chem Rosskazal Polet Polet Layki," Komsomolskaya Pravda, 3 April 1958

Name : ISAKOV, P.

Title : Candidate of Biological Sciences
Stalin Prize Winner

Remarks : In an article entitled "The Problems of Returning Satellite Crews From Outer Space" P. Isakov discusses two possibilities of a safe return of satellite crews: return of the satellite as an entire unit, and return of the crew only. The latter seems to be the easiest and most practicable possibility. The author maintains that if the speed of the satellite can be successfully lowered to the desired degree, the ejection of its crew can be accomplished in a hermetically sealed capsule. However, the practical development of such a method requires supplementary data on, e.g., rises in temperature due to different braking intensities, the cooling of the satellite under different conditions, etc. The results of experiments with the ejection of live animals from high-altitude rockets are of primary significance to research on human re-entry from outer space.

Source : N: Krasnaya Zvezda, No. 152, 3 July 1958, p. 3, c. 3

ISAKOV, P. K. (Stalin Prize Laureat, Cand. of Biol. Sci.)

"On Launching a Single-Stage Geophysical Rocket to an Altitude of 450 km on August 27, 1958."

Krasnaya Zvezda, 1958, September 2, p. 2.

Translation: 1,202,562/

ISAKOV, P. K., KAZNEVSKIY, V. P., RAPOPORT, T. L., LUTSKIY, V. K.

What are the perspectives for the development of astronautics in the coming years? (by the authors of the book Some Questions and Answers about Artificial Space Satellites)
Tekhnika Molodozhi, No. 2, 1958.

1311A01, 1-1
BARUSHKIN, V.I.; ISAKOV, P.K.; MALKIN, V.B.; USACHEV, V.V. (Moskva)

Respiration and gas exchange in man subjected to radial acceleration
[with summary in English]. Fiziol.zhur. 44 no.4:342-347 Ap '58.

(MIRA 11:4)

(RESPIRATION,

eff. of rotation of man in centrifuge (Rus))

(CENTRIFUGATION,

eff. of rotation of man in centrifuge on resp. &
exchange of gases (Rus))

29(0)

PHASE I BOOK EXPLOITATION

SOV/3184

Isakov, Petr Kuz'mich, Viktor Pavlovich Kaznevskiy, Valeriy
Konstantinovich Lutskiy, and Tamara Lyudvigovna Rapoport

Iskusstvennyye sputniki zemli; 100 voprosov i otvetov (Artificial
Earth Satellites; 100 Questions and Answers) Moscow, 1959. 95 p.
75,000 copies printed.

Sponsoring Agency: Obshchestvo po rasprostraneniyu politicheskikh
i nauchnykh znaniy RSFSR, and Vsesoyuznoye dobrovol'noye
obshchestvo sodeystviya aviatsii i flotu. Sektsiya astronavitiki.

Ed. (Title page): V. P. Kaznevskiy; Ed. (Inside book): L. M.
Gorodenskiy; Tech. Ed.: G. V. Furman.

PURPOSE: This booklet is intended for the general reader interested
in space exploration and travel.

COVERAGE: This booklet on space vehicles and travel is set up in
the form of questions and answers. Among the questions dis-
cussed are: the construction of satellites, fuels, rockets,

Card 1/11

Artificial Earth (Cont.)

SOV/3184

orbital motion, satellite observation, man in space, astronavigation, etc. The authors thank Professor V. V. Dobronravov, Professor N. A. Fomin, I. A. Merkulov, Candidate of Technical Sciences S. M. Il'yashenko, N. A. Varvarov, V. G. Panteleyev, V. V. Glukhov, and N. V. Danilevskaya. No references are given.

TABLE OF CONTENTS:

I. Purpose and Working Principle of Artificial Satellites.	
1. Why are artificial satellites necessary?	3
2. How was the first artificial satellite constructed?	4
3. How was the second artificial satellite constructed?	6
4. How was the third artificial satellite constructed?	8
5. What types of artificial satellites were launched by the Americans in 1958?	10
6. How were American artificial satellites constructed?	10
7. How was the first Soviet artificial satellite of the sun constructed?	11
8. Why was the first earth satellite made in a spherical form?	12

Card 2/11

ISAKOV, P. K.

"Problem of Return of a Sputnik Crew from Cosmos."

Science and Culture, Vol. 25, No. 4, Oct. 1959. p. 231

GURFINKEL', V.S.; ISAKOV, P.K.; MALIKIN; POPOV, V.I.

Coordination of posture and movements in man under conditions of increased and lowered gravitation. Biul. eksp. biol. i med. 48 no. 11: 12-18 N '59. (NIRA 13:5)

1. Iz Instituta eksperimental'noy biologii i meditsiny sibirskogo otdeleniya Akademii nauk SSSR (dir. - prof. Ye. N. Meshalikin), Novosibirsk. Predstavlena deystvitel'nym chlenom AMN SSSR V. V. Parinym.

(GRAVITATION)

(POSTURE physiol.)

(MOVEMENTS physiol.)

ISAKOV, P.K.

PHASE I BOOK EXPLOITATION

CZECH/4862

Dvořák, Josef, Chief Author, M. D., Petr Kuzmíč Isakov, M. D. and
Jan Hospodař, M. D.

Člověk v meziplanetárním prostoru (Man in Interplanetary Space) Prague,
Orbis, 1960. 217 p. 20,000 copies printed. (Series: Malá moderní
encyklopedie, sv. 19)

Resp. Ed.: Vladimír Špinka, Engineer

PURPOSE: This popular-style book is intended for the general reader.

COVERAGE: The book is based mainly on Soviet data and presents the physical
aspects of outer space from the biological point of view. Attention is
given to the effect of space factors on the body and methods and equipment
for human flight in outer space are described. Details of the first experi-
ment with the dog Layka in space flight are given. Return to the Earth, the
selection and training of astronauts, scientific results of space flights,

Card 1/1

ISA KOV, P. K

TABLE I BOOK EXPLANATION

SOV/4946

Nichajlov, A. A., ed.

Scientific and technical aspects of space stations; collection of articles. Moscow, Izdat. Ak. SSSR, 1960. 144 p. 25,000 copies printed. (Series: Nauchnoye nazh. SSZh. Nauchno-populyarnaya kniga)

Reep, M. I. A. A. Nichajlov; Compiler: V. V. Fedorov; Ed. of Publishing House: Ye. M. Klyuz; Tech. Ed.: I. D. Novichkova.

PURPOSE: This book is intended both for the space specialist and the average reader interested in space problems.

COMMENT: The book contains 73 short articles by various Soviet authors, covering a wide range of problems in the launching of artificial earth satellites and space stations. The possibilities of future developments are also discussed. The articles were published in the period of 1957-1960. No person-articles are mentioned. There are no references.

II. PRELIMINARY RESULTS OF SPACE INVESTIGATION

Kashin, A. V. Historical Summary [October 3, 1958] 72
Kashin, A. V. First Scientific Results of the Flight of Soviet Sputniks [March 26, 1958] 75

Soviet Artificial Earth Satellites [Prawda, October 9, 1957] 78

Alimov, V. I. Candidate of Physical and Mathematical Sciences. Automatic Laboratory in Space [November 14, 1957] 90

Kashin, A. V. Doctor of Physical and Mathematical Sciences. Investigation of the Upper Atmosphere With the Help of the Artificial Earth Satellite [October 10, 1957] 93

Soviet Artificial Earth Satellites [Prawda, April 27, 1958] 96

Mitkov, D. V. Candidate of Physical and Mathematical Sciences. On the Way to an Understanding of the Universe [December 4, 1957] 112

Alimov, V. I. Corresponding Member of the Academy of Sciences USSR and L. I. Kuznetsov, Candidate of Physical and Mathematical Sciences. The Sun, Cosmic Radiation, and Sputniks [November 14, 1957] 115

Sergiyev, E. Professor. Investigation of Outer Space [December 11, 1957] 118

Third Soviet Artificial Earth Satellite [Prawda, May 16, 1958] 124

Discovered: Widening Knowledge About the Universe [Prawda, October 5, 1958] 153

Mitkov, D. V. Candidate of Physical and Mathematical Sciences. In Outer Space - Our Third Sputnik [July 1958] 174

Kashin, A. V. Doctor of Physical and Mathematical Sciences. Sputniks Look Into Outer Space [March 22, 1956, December 11, 1957] 183

Arsent'yev, V. V. Sputnik on a Photo Plate [March 1958] 188

Martynov, D. Ye. Doctor of Physical and Mathematical Sciences. Secret of the Mysteries of the Universe [May 18, 1958] 190

Polyakov, A. I. Candidate of Physical and Mathematical Sciences. Why Does the Amount of Reflected Light from the Sputnik Change? [September 12, 1958] 191

Polyakov, S. M. High Altitude Laboratories [May 16, 1958] 192

Mazylch, A. D. Doctor of Physical and Mathematical Sciences. Outer Space Laboratory [1958] 194

Fedorov, V. E. Corresponding Member of the Academy of Sciences USSR. Assault on Outer Space [1958] 204

Fedorov, V. E. Candidate of Biological Sciences. Life on the Sputnik [November 14, 1957] 214

ISAKOV, P.K., kand.biologicheskikh nauk

Test flights of a space ship. Priroda no.6:4 Ja '60.
(MIRA 13:6)

1. Predsedatel' komiteta kosmicheskoy meditsiny sektsii
astronaviiki Dobrovol'nogo obshchestva sodeystviya armii,
aviatsii i flotu.
(Space ships)

85537

S/026/60/000/009/002/010
A166/A029

17.2550

AUTHOR: Isakov, P.K., Chairman

TITLE: Man Will Fly Into Space

PERIODICAL: Priroda, 1960, No. 9, pp. 4 - 5

TEXT: The second Soviet space ship contained 2 dogs, white and black mice, rats, chlorella, tradescantia, drosophila, fungus cultures, human and rabbit skin tissues, pea, onion, maize and wheat seed, bacteria and bacteriophages. Special pick-ups attached to the dogs recorded their pulse, respiratory functions, arterial pressure, body temperature, etc., while a television system relayed back information on the animals' external reactions to the various phases of space flight. The animals remained long enough in the upper layers of the atmosphere to give valid data on the effect of weightlessness, cosmic radiation and X-rays on a living body. These results will be of great assistance to space biology and future manned space flight.

ASSOCIATION: Komitet kosmicheskoy meditsiny seksii astronavitiki Aviatsionnoy federatsii SSR (Committee on Space Medicine of the Astronautical Section, Aviation Federation of the USSR), Moscow

Card 1/1

ISAKOV, P.K., kand.biolog.nauk

Space speeds. Nauka i zhizn' 10 no.3:14-17 Mr '60. (MIRA 24:8)

1. Predsedatel' Komiteta kosmicheskoy meditsiny sektsi
astronavtiki Dobrovol'nogo obshchestva sodeystviya armii
aviatsii i flotu (Moskva).
(ASTRONAUTICS) (SPACE MEDICINE)

Isakov, I.K.

PHASE I BOOK EXPLOITATION

80V/5687

Pokrovskiy, Georgiy Iosifovich, Petr Kuzmich Isakov, Igor' Alekseyevich Merkulov,
and Vladimir Vasil'yevich Dobronravov

Put' v kosmos (Road to Space) Moscow, Izd-vo "Znaniye," 1961. 44 p.
(Series: Vsesoyuznoye obshchestvo po rasprostraneniya politicheskikh i
nauchnykh znaniy. Seriya IV, 1961: Tekhnika, no. 15) 40,000 copies printed.

Ed.: T. F. Islankina; Tech. Ed.: L. Ye. Atroshchenko.

PURPOSE: This booklet is intended for general readers.

COVERAGE: This is a collection of 4 popular-type articles in which some data
on Yu. A. Gagarin's space flight are given and fundamentals of space flights
are discussed. Several diagrams of satellite trajectories are given, and
three photos of Gagarin and of a man in weightlessness test appear in the
text. No personalities are mentioned. There are no references.

Card 1/2

Road to Space

SOV/5687

TABLE OF CONTENTS:

Pokrovskiy, G.I., Professor, Doctor of Technical Sciences. On the Development of Cosmonautics [Space Navigation]	3
Isakov, P.K., Doctor of Medical Sciences. Man in Space	12
Merkulov, I.A. Spaceships	23
Dobronravov, V.V., Professor, Doctor of Physical and Mathematical Sciences. Directing the Flight and Return of a Spaceship	38

AVAILABLE: Library of Congress

Card 2/2

AC/rn/mas
10-17-61

S/026/61/000/005/001/003
D051/D113

AUTHOR: Isakov, P. K., Member, Astronautics Section (see Association)

TITLE: Man returns from a cosmic flight

PERIODICAL: Priroda, no. 5, 1961, 8-13

TEXT: On the occasion of the successful flight of spaceman Yu. A. Gagarin the author very generally sets forth medico-biological requirements for future spaceship flights. He considers that biotelemetry, i.e. information radioed from the spaceship on the astronaut's health, can now be considered as a science in its own right. Research is now being conducted to ensure that only the most important information on the astronaut's health is obtained during flight. From this point of view, it has been proposed to transmit to Earth only signals on abnormal changes which threaten flight safety. This would help radio channels to be used for transmitting more useful information. The author then discusses the question of the biological cycles of human physiological processes and states that the usual daily ratio of 16 hours wake to 8 hours sleep, the thermoregulation processes depending on the seasons and peristalsis of the alimentary canal and the

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Man returns from a cosmic flight

S/026/61/000/005/001/003
D051/D113

digestion processes depending on normal food consumption may prove inadequate for spacemen completing prolonged flights. The material collected up to the present contains much data which will, if necessary, permit the astronaut's organism to be adapted to changes in the daily periodicity of functions. Psychical factors such as the break in contact with normal environment, adaption to a limited number of signals coming from the Earth and the increased importance of the immediate surroundings within the cabin, will affect the spaceman's nervous processes. Special attention, therefore, must be paid to the spaceman's physical and psychical condition, in order to ensure flight safety. Another factor of great importance to spacemen will be immunity from the possibly harmful effect of microorganisms within the body and on the skin. These microorganisms do not cause any harm to man under terrestrial conditions, but their effect may alter in interstellar space. Measures must also be taken to prevent the transplantation of microorganisms onto other planets, to protect the spaceman against foreign microorganisms on these planets and to prevent these microorganisms being brought back to Earth. The author finally mentions the problem of cellular division, which may be of great importance to future astronauts. Under interstellar conditions, cellular divisions per unit of time will possibly be different from

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Man returns from a cosmic flight

S/026/61/000/005/001/003
D051/D113

those observed on Earth. The data collected from the automatic recording systems on the vital activity of microorganisms which were used in the second space ship can be considered as a contribution to future investigations in this field. There are 2 inserts including 8 photographs.

ASSOCIATION: Sektsiya astronautiki DOSAAF (Section of Astronautics of DOSAAF)

Card 3/3

21742

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S/025/61/000/006/004/007
D244/D305

AUTHORS: Dvoržák, I. (Prague), and Isakov, P. (Moscow) Candidates of Medical Sciences

TITLE: At speeds close to the velocity of light

PERIODICAL: Nauka i zhizn', no. 6, 1961, 13-15

TEXT: It has been long known that movement at a constant speed does not induce any marked changes in the human organism; man is not conscious of the high velocity of rotation of the earth on its axis or of its movement around the sun. But any acceleration or deceleration, however slight, is immediately felt by the human body. This problem of the effect of large changes in speed on man is of considerable importance, since future spaceships may well be launched with velocities in excess of that necessary for entering into orbit around the earth. According to the theory of relativity time elapses more slowly in a moving rocket than on earth. There are two viewpoints on the magnitude of the difference in time between launching and landing of a rocket;

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D244/D305

OK

At speeds close to the velocity of light

some scientists affirm that the time difference on earth and in the rocket will increase with the length of the flight, while others maintain that this difference will disappear as the rocket is braked on its approach to the earth. But it is of little importance biologically as to which theory is correct; any age changes experienced by the astronauts during flight will not disappear during the approach to earth, and it will, therefore, be possible to measure them after the rocket has landed. At the Astronautical Congress of 1956 [Abstracter's note: No other details given] Professor Zenger suggested that biological phenomena will take place more slowly in photon-rocket flights than on earth. If the time of space travel to the stars and planets of extragalactic nebulae can thus be "shortened", a flight to the nearest star in the constellation of Centaurus would take less than 3 months; the astronauts would have become 4 years younger than their original coevals on their return to earth. Similarly a journey around the Einstein universe would be completed in 42

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D244/D305

At speeds close to the velocity of light

years, whereas millions of years would have passed on the earth during the course of such a flight. These flights will raise three serious problems. One is technical - the matter of relocating the earth after a journey around the cosmos; the solar system will have by then changed its position in the galaxy. There is also the social aspect, since the astronauts will find on their return to earth people with ideas and interests very different from those of the inhabitants at the time of their departure. The third problem is biological - the manner in which processes will take place in the human organs during flight. Events in each cell are intimately related to a number of physico-chemical reactions which often result in the reformation of original substances - the so-called cyclic conversions of a definite rhythmic nature. Together with such changes in a complete organism there also takes place the counting-off of the time of its existence. The rate of changes in an organism is not the sum of the changes in all the separate cells; the mechanisms

X

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D244/D305

X

At speeds close to the velocity of light

of a complete organism are of a higher order than those of its individual cells. The passage of time differs in relation to the age of the organism; the exchange of matter, the rate of healing of injuries and reactions to different conditions of the surrounding environment vary with the age of the organism. The physiological functions of an organism are extremely diverse and depend on very different irritants. Their recording and subsequent transmission back to earth would hardly permit the lags related to another course of time in the rocket to be established. This is the reason for using the simplest micro-organisms - whose rate of cell-division in a nutritious environment is quite stable - in cosmic experiments. By placing them in an artificially-created stable medium inside a rocket, it may in the future be possible to evaluate the effect of changes during the passage of time. If the rate of cell-division in the rocket during a period of time reckoned in terrestrial hours appears to be very different, sufficiently positive data will have been obtained in favor of the

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D244/D305

At speeds close to the velocity of light

so-called biological theory of relativity. Micro-organisms were also included in the various objects aboard the second Soviet spaceship, some of these being inserted in special containers with automatic life-activity recorders. By improving these automatic devices it might be possible to obtain from them signals about the processes of cell-division in the micro-organisms, and the containers could then be ejected from the sputniks and placed in orbit around the earth for an indefinitely long period of time. In view of their proximity to earth the automatic devices would not require especially powerful radio-transmitters and would hence serve as an economic, but efficient method of checking on biological changes in outer space. There are 5 figures. X

Card 5/5

17.2250

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32556
S/177/61/000/006/001/003
D298/D305

AUTHORS:

Babushkin, V.I., Lieutenant-Colonel, Medical Corps,
Candidate of Medical Sciences, Isakov, P.K., Colonel,
Medical Corps, Candidate of Biological Sciences, Malkin,
V.B., Candidate of Medical Sciences, and Usachev, V.V.,
Lieutenant-Colonel, Medical Corps, Candidate of Medical
Sciences

TITLE:

Some changes in higher nervous activity under acceleration

PERIODICAL:

Voyenno-meditsinskiy zhurnal, no. 6, 1961, 54-58

TEXT: Because of the effects of acceleration in flight on the brain the authors studied the functional state of the higher sections of the central nervous system under radial acceleration. Radial acceleration was effected in a centrifuge with a seat equipped for recording motor reflexes and studying the structure of certain special volitional movements. The first series of tests studied the state of conditioned motor reflexes to light and sound stimuli under varying degrees of acceleration.

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Some changes in higher ...

The results showed that under relatively low acceleration of 3-4 g a slight increase in the latent period of the motor conditioned response was noted. As the experiment was repeated, the difference in the latent period became less marked. At greater accelerations of 5-6 g the picture was different. While the latent period of response to a sound stimulus increased slightly, there was a marked increase in the latent period of response to light stimulus. To check the pilot's work capacity under acceleration a second series of tests studied the effects of acceleration on motor actions simulating working movements that a pilot has normally to make. It was found that the changes in the structure of the motor action varied with the degree of acceleration and the plane in which the activating arm moved. The most marked increase in movement time was noted when the arm was shifted in a direction opposite to the action of the centrifugal force. When the arm was moved in a plane perpendicular to the action of centrifugal forces, the movement time increased only slightly. When an anti-gravity suit was worn under only slight acceleration, the latent period of conditioned motor reflexes

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... pulsation from these receptors has no

Some changes in higher...

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D298/D305

definite significance; the disturbances are obviously caused by dystrophy of cerebral blood circulation as a result of the drop in blood pressure in the cerebral vessels. The visual disturbances under acceleration are probably caused by dystrophy of the peripheral section of the visual analyzer, i.e., the retina. On the basis of their observations the authors conclude that sound signaling is preferable to visual signaling in flying and could be used as a basis for a more rational distribution of control levers and switches in a plane's cabin. There are 2 tables and 2 figures. X

SUBMITTED: November, 1960

Card 4/4

ISAKOV, P.K., doktor biolog.nauk

What we know about the state of weightlessness. Nauka i zhyttia
11 no.9:7, 10 S '61. (MIRA 14:10)
(Weightlessness)

DVORZHAK, I., kand. mek. nauk (Moskva); DRIV. P., kand. med. nauk (Moskva)

At speeds close to the speed of light... Nauka i zhizn'
2^o no.6:13-15 Je '61. (MIRA 14:7)
(Space sciences)

PHASE I BOOK EXPLOITATION

SOV/6298

Isakov, Petr Kuz'mich, Doctor of Medical Sciences, and Rostislav
Andreyevich Stasevich, Candidate of Technical Sciences

Skorosti, uskoreniya, nevesomost'; nekotoryye voprosy fiziki i
fiziologii primenitel'no k poletam v atmosfere i kosmicheskom
prostranstve (Velocities, Accelerations, and Weightlessness; Some
Problems in Physics and Physiology as Applied to Atmospheric and
Outer Space Flight). 2d ed., rev. and enl. Moscow, Voenizdat M-va
oborony SSSR, 1962. 148 p. (Series: Nauchno-populyarnaya biblio-
teka Voennoogo izdatel'stva) 12,500 copies printed.

Ed.: A. M. Shorin; Tech. Ed.: T. F. Myasnikova.

PURPOSE: This book is intended for the general reader interested in
the problems of aviation and astronautics.

COVERAGE: This book is a revised and enlarged edition of the authors'
brochure "Velocities, Accelerations, Overloads", published in 1956.
Weightlessness is treated in a special chapter, which outlines the

Card 1/1

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S/216/62/000/003/002/002

1021/1221

AUTHOR: Yuganov, Ye. M., Isakov, P. A., Kaciyan, I. I., Afanasiev, D. V. and Pavlov, G. I.

TITLE: Motor activity of intact animals under conditions of artificial gravity

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya Biologicheskaya, no. 3, 1962, 455-460

TEXT: The minimal effective value of artificial gravity necessary to maintain the body posture and coordination of movements of mice and rats under conditions of weightlessness as in the parabolic flight of an airplane was determined. Artificial gravity was created in a small size centrifuge which produced radial accelerations varying from 0.05 to 1.0 g. Accelerations of 0.28 to 0.3 g were sufficient for prophylaxis of the unfavourable effect of weightlessness upon the motor reactions of the animals. There are 2 figures and 1 table. English-language references are: Beckh H. J. 1959. Flight experiments about human reactions to accelerations which are followed or preceded by weightlessness. Aerospace medicine, 30, 6, 391-409; Graveline D. E. Balke B., McKensie R., Hartmann B. 1961. Psychobiologic effects of water immersion induced hypodynamics. Aerospace medicine, 32, 5.

ASSOCIATION: Institut normalnoi i putologicheskoi fiziologii AMN SSSR (Institute of Normal and Pathological Physiology, AMS USSR) Moscow

SUBMITTED: February 6, 1962

Card 1/1

ACCESSION NR: AT4042650

S/0000/63/000/000/0047/0051

AUTHOR: Babushkin, V. I.; Isakov, P. K.; Malkin, V. B.; Usachev, V. V.

TITLE: Physiological reactions to radial accelerations

SOURCE: Konferentsiya po aviatsionnoy i kosmicheskoy meditsine, 1963.
Aviatsionnaya i kosmicheskaya meditsina (Aviation and space medicine); materialy konferentsii. Moscow, 1963, 47-51

TOPIC TAGS: acceleration effect, radial acceleration, cardiovascular system, respiratory system, pilot testing, work capacity, compensating reaction

ABSTRACT: Experiments to determine the effects of acceleration on various physiological functions and the work capacity of pilots were performed on centrifuges and in flights. Particular attention was paid to the effects of acceleration on the cardiovascular and respiratory systems. Examination of data indicated that persons able to withstand accelerations of 6 to 7 g reacted to acceleration stress by an increase in arterial pressure, the heartbeat rate, and the respiration rate. These indices were less well defined in persons who could not withstand acceleration well. Analysis of experimental data has shown that an increase in pulmonary

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ventilation accompanies acceleration stress. The pulmonary ventilation of pilots subjected to an acceleration stress of 5 g increases more than two fold. This effect can be reduced considerably by the use of high-altitude pressure suits. When pilots are subjected to accelerations of between 5 and 6 g, oxygen consumption almost doubles and the production of CO₂ by the body increases significantly. Results of experiments on gas exchange have indicated that during the first five minutes after acceleration has taken effect, the consumption of oxygen remains increased while the respiration coefficient remains close to 1. This indicates that acceleration causes a significant increase in the intensity of the metabolic processes. The use of a high-altitude pressure suit reduces the consumption of oxygen and of energy requirements. The development of compensating reactions during acceleration, such as the increase of muscle tone, the increase of the functional activity of the cardiovascular system, and the increase in respiration, brings about an increase in energy requirements. The use of a high-altitude pressure suit has the effect of relieving the organism of part of the "load," thereby increasing the physiological capabilities of the pilot.

ASSOCIATION: none

Card 2/3

ISAKOV, P. K.; YUGANOV, Ye. M.; KAS'YAN, I. I. --

"The influence of gravitational force in organization of body functions and problems of cosmic flights."

report submitted for 15th Intl Astronautical Cong, Warsaw, 7-12 Sep 64.

L 16017-65 ENG(j)/ENG(r)/ENT(1)/FS(v)-3/ENG(v)/ENG(a)/ENG(c) Pb-1/Pa-5/Pb-1
 AEDC(a)/SSD/AFWL/AFMD(c)/AMD/AFETR/AFTC(a)/AFTC(b)/ESD(t) DD/ED
 ACCESSION NR: AP4048656 S/0216/64/000/006/0913/0916

AUTHOR: Isakov, P. K.; Yuganov, Ye. M.; Kas'yan, I. I.

TITLE: The influence of gravity in determining the function of an organism

SOURCE: AN SSSR. Izvestiya. Seriya biologicheskaya, no. 6, 1964, 913-916

TOPIC TAGS: changed gravity, weightlessness, acceleration, physiological effect, venous pressure, gas exchange level

ABSTRACT: An attempt is made to establish a unified theory on the effects of weightlessness and acceleration on the organism. Holding that both phenomena can be regarded as functions of changes in the intensity of the gravitational field, data is cited on experiments concerning their effect on bioelectrical activity in the skeletal muscles, venous pressure, and on the gas-exchange rate. It is stated that this issue has been clouded by the use of data on experiments in the short-term weightlessness of parabolic flight, where the adjustment periods were inadequate. It is shown that an acceleration of up

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to 5G results in a proportional increase in electrical biopotentials in the skeletal muscles, while weightlessness causes a sharp decrease in their amplitude and often results in "bioelectrical silence". Supporting evidence is obtained by measuring the venous pressure in the right ventricle of the heart, which rises by about 15 mm Hg during transverse acceleration of 3G and drops by 15 to 25 mm Hg (i.e., often below the initial level) when weightlessness is achieved. Contradictory data on bioelectric activity and venous pressure comes from studies of gas-exchange levels existing during acceleration and weightlessness. The gas-exchange rate rises during acceleration primarily because of the increase in muscle tone required to maintain posture under these conditions; this also applies to short-term acceleration. In successive experiments, however, these changes become less marked, since the stabilization level is being reached. In order to reach this stabilization level, it is necessary that periods of acceleration and weightlessness be considerably increased and that acceleration should not exceed 2G. It is concluded that it is possible to equate the effects of changed gravitational intensity on the organism with the change in body weight which takes place simultaneously. Orig. art. has: 2 tables.

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ASSOCIATION: none

SUBMITTED: 25Jun64

NO REF SOV: 006

ENCL: 00

OTHER: 001

SUB CODE: LS, PH

ATD PRESS: 3140

Card 3/3

ISAKOV, P.K.; YUGANOV, Ye.M.; KAS'YAN, I.I.

A theory of weightlessness is needed. Av. i kosm. 47 no.11:31-33
N '64. (MIRA 17:11)

ISAKOV, P.P.; SKARYTIN, L.I.; SHCHERBAKOV, V.A.; MAKARENKO, V.I.;
BOL'SHUKHIN, V.S.; PIVNIK, M.M.; CHUDAKOV, V.D.; YAKOVLEV,
G.S.;

[DET-250 diesel-electric tractor; its construction and operation] Dizel'-elektricheskii traktor DET-250; ustroistvo i ekspluatatsiia. Moskva, Mashinostroenie, 1965. 479 p.
(MIRA 18:7)

SUBJECT: Isakov, V. USSR/Sound Synthesizer 25-4-21/34

AUTHOR: Isakov, V.

TITLE: Sound Synthesizer (Sintetizator Zvukov)

PERIODICAL: Nauka i Zhizn', April 1957, # 4, p 46 (USSR)

ABSTRACT: Electronic musical instruments are already in use capable of producing sounds of various orchestral instruments. Recently, scientists succeeded in producing sounds of the human voice. The greatest difficulty consisted in finding an equivalent for the spoken consonants. For recording the text, a keyboard similar to a typewriter is used. The keys punch holes in a paper band, and each hole in the paper influences a photo-electric cell, which in its turn sets in motion certain vibration contours. The sound changes according to the various combinations of holes in the paper band.

ASSOCIATION: This article contains three illustrations.

PRESENTED BY:

SUBMITTED:

AVAILABLE: At the Library of Congress

Card 1/1

ISAKOV, V. (Arkhangel'sk)

Navigation by leading lines. Mor.flot 17 no.3:21 Mr '57.

(MIRA 10:3)

(Navigation)

VASIL'YEV, V.; GORSHKOV, A.; ISAKOV, V.; KHEMELEVA, V.

And what does the economic council think? Okhr.truda i sots.
strakh. 3 no.2:41 F '60. (MIRA 13:6)

1. Starshiy obshchestvennyy inspektor Ul'yanovskogo avtosavoda
(for Vasil'yev). 2. Predsedatel' tsakhkoma pressovogo tsakha
savoda "Kontaktor"(for Gorshkov). 3. Tekhnicheskij inspektor
Ul'yanovskogo oblsoprofa (for Isakov). 4. Spetsial'nyy
korrespondent zhurnala "Okhrana truda i sotsial'noye strakhovaniye
(for Kemeleva).

(Ul'yanovsk Province--Industrial safety)

ISAKOV, V.

Together with party organizations. Okhr.truda i sots.strakh.
3 no.6:19-21 Je '60. (MIRA 13:7)

1. Tekhnicheskii inspektor Ul'yanovskogo oblsovprofa.
(Ul'yanovsk Province—Industrial hygiene)
(Communist Party of the Soviet Union)

ISAKOV, V.

Comprehensive mechanization of accounting and calculating work
at an industrial enterprise. Sots.trud 6 no.3:61-66 Mr '61.

(MIRA 14:3)

(Machine accounting)